

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1 (currently amended): A temperature control apparatus for a pulse width modulation

5 (PWM) device, the PWM device comprising:

a pulse width modulator for controlling a working frequency of the PWM device;

a first switch controlled by the pulse width modulator, the first switch coupled between an external power source and an output node of the PWM device; and

10 a second switch controlled by the pulse width modulator, the second switch coupled between ground and the output node of the PWM device;

wherein the pulse width modulator controls operation of the first and second switches according to a voltage level of an output voltage of the PWM device; and
the temperature control apparatus comprising:

15 a temperature detector installed around the PWM device for detecting a present working temperature of the PWM device; and

a temperature comparator coupled to the temperature detector and the PWM device for comparing the present working temperature with a maximum limiting temperature and a minimum limiting temperature, wherein when the present
20 working temperature is higher than the maximum limiting temperature, [[a]] the working frequency of the PWM device will be reduced in a step variation frequency, and when the present working temperature is lower than the minimum limiting temperature, the working frequency of the PWM device will be increased in the step variation frequency.

25

2 (original): A temperature control apparatus of claim 1, wherein when the present working temperature is between the maximum limiting temperature and the minimum

limiting temperature, the working frequency of the PWM device will not be changed.

3 (original): A temperature control apparatus of claim 1, wherein the maximum limiting
temperature, the minimum limiting temperature, and the step variation frequency are
5 adjustable.

4 (original): A temperature control apparatus of claim 1, wherein the working frequency
will not be changed during a predetermined period after the last change of the working
frequency.
10

5 (original): A temperature control apparatus of claim 1, wherein the PWM device
provides a current for a central processing unit.

6 (currently amended): A method for controlling the temperature of a PWM device
15 comprising:

providing the PWM device, the PWM device comprising:

a pulse width modulator for controlling a working frequency of the PWM
device;

a first switch controlled by the pulse width modulator, the first switch coupled
20 between an external power source and an output node of the PWM device; and

a second switch controlled by the pulse width modulator, the second switch
coupled between ground and the output node of the PWM device;

wherein the pulse width modulator controls operation of the first and second
switches according to a voltage level of an output voltage of the PWM device;
25

detecting a present working temperature of the PWM device;

when the present working temperature is higher than a maximum limiting
temperature, reducing [[a]] the working frequency of the PWM device in a step variation
frequency; and

when the present working temperature is lower than a minimum limiting temperature, increasing the working frequency of the PWM device in the step variation frequency.

- 5 7 (original): A method of claim 6, wherein when the present working temperature is between the maximum limiting temperature and the minimum limiting temperature, the working frequency will not be changed.
- 8 (original): A method of claim 6, wherein the maximum limiting temperature, the
10 minimum limiting temperature, and the step variation frequency are adjustable.
- 9 (original): A method of claim 6, wherein the working frequency will not be changed during a predetermined period after the last change of the working frequency.
- 15 10 (original): A method of claim 6, wherein the PWM device provides a current for a central processing unit.